

In re Patent Application of:
SCHRADER
Serial No. 10/807,765
Filing Date: March 24, 2004

In the Claims:

Claims 1-17 (CANCELLED)

18. (CURRENTLY AMENDED) A method of removing food product defects from a food product slurry comprising the steps of:

advancing receiving a food product slurry at an advancing mechanism and forming thereat a substantially planar flow of food product slurry while advancing the food product slurry along a predetermined path of travel into an inspection zone;

imaging one side of the substantially planar flow of the food product slurry at the inspection zone to acquire image data of the food product slurry;

processing the image data to determine food product defects within the food product slurry; and

rejecting any food product slurry determined to be defective.

19. (CURRENTLY AMENDED) ~~A method~~ The method according to Claim 18, wherein the step of imaging further comprises the step of illuminating the food product slurry at the inspection zone and acquiring images from a camera located at the inspection zone.

20. (CURRENTLY AMENDED) ~~A method~~ The method according to Claim 19, and further comprising the step of illuminating the food product slurry at a predetermined range of wavelengths for highlighting food product defects to be imaged.

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Please add new claims 21-32 as follows:

21. (NEW) The method according to Claim 20, and further comprising the step of illuminating the food product slurry at a predetermined range of wavelengths to cause defects to fluoresce.

22. (NEW) The method according to Claim 18, wherein the step of advancing food product slurry further comprises the step of conveying food product slurry into the inspection zone by one of conveying along a belt conveyor, discharging through a nozzle, or extruding or pumping through a translucent material to allow imaging of the food product slurry therein.

23. (NEW) The method according to Claim 18, wherein the step of rejecting any food product slurry determined to be defective comprises the step of diverting any food product slurry determined to be defective from the path of travel to remove any defective food product slurry.

24. (NEW) The method according to Claim 23, wherein the step of diverting the food product slurry from the path of travel further comprises the step of blowing any food product slurry away from the path of travel.

25. (NEW) The method according to Claim 23, wherein the step of diverting the food product slurry further comprises the step of mechanically engaging and diverting the food

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Serial No. **10/807,765**
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product slurry determined to be defective away from the path of travel.

26. (NEW) A system for removing defects from citrus pulp comprising:

an advancing mechanism that receives food product slurry and forms a substantially planar flow of food product slurry and advances the food product slurry along a predetermined path of travel into an inspection zone;

a food product slurry imager positioned at one side of the substantially planar flow of the food product slurry at the inspection zone for acquiring image data of the food product slurry;

a processor operatively connected to said food product slurry imager for receiving the image data and processing the image data to determine defects within the food product slurry; and

a rejection mechanism for rejecting any food product slurry determined to be defective.

27. (NEW) The system according to Claim 26, wherein said food product slurry imager further comprises a light source for illuminating the food product slurry at the inspection zone and a camera located at the inspection zone for acquiring images of the food product slurry.

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28. (NEW) The system according to Claim 27, wherein said light source is operative for illuminating the food product slurry at a predetermined range of wavelengths for highlighting defects to be illuminated.

29. (NEW) The system according to Claim 28, wherein the predetermined range of wavelengths is such as to cause defects to fluoresce.

30. (NEW) The system according to Claim 26, wherein said advancing mechanism comprises a belt conveyor, nozzle or translucent material through which food product slurry is advanced and imaged.

31. (NEW) The system according to Claim 26, wherein said rejection mechanism comprises a mechanical diverter that diverts any food product slurry determined to be defective from the path of travel.

32. (NEW) The system according to Claim 26, wherein said rejection mechanism comprises at least one air nozzle for blowing air onto food product slurry determined to be defective and diverting the defective food product slurry from the path of travel.